Physics World newsletter

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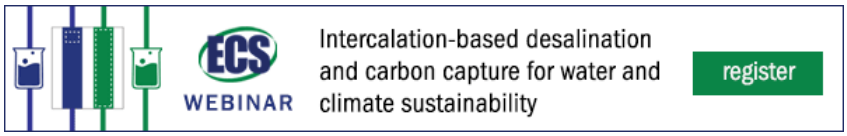


Radiation therapy plays an essential role in cancer treatment, but in many regions of the world, access to radiotherapy resources is extremely limited. Aiming to address this shortfall, researchers in Canada are developing a low-cost orthovoltage radiotherapy system – called KOALA – that uses a single X-ray tube for both imaging and treatment delivery.

With initial performance tests looking promising, the team is now teaming up with veterinarians to test the KOALA system in pet dogs diagnosed with cancer, while working alongside to refine the system for clinical treatments.

Tami Freeman, online editor, *Physics World*

THIS WEEK'S HEADLINES

BIOPHYSICS | RESEARCH UPDATE

Speedy worms behave like active polymers in disordered mazes

The presence of disorder causes worms to speed up, not slow down – a surprising result with applications in robotics

COMPLEX SYSTEMS | RESEARCH UPDATE

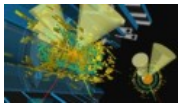
Abnormal 'Arnold's tongue' patterns appear in a real oscillating system

Ultrafast laser sheds new light on complex synchronization phenomena

RADIOTHERAPY | RESEARCH UPDATE

Dual-robot radiotherapy system designed to reduce the cost of cancer treatment

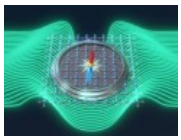
Researchers in Canada are developing a low-cost orthovoltage radiotherapy system for use in low-resource and geographically remote regions



PARTICLE AND NUCLEAR | RESEARCH UPDATE

Top-quark pairs at ATLAS could shed light on the early universe

Massive particles reveal properties of the quark–gluon plasma



INSTRUMENTATION AND MEASUREMENT | RESEARCH UPDATE

Superconducting device delivers ultrafast changes in magnetic field

System could provide important insights into the dynamics of magnetic materials

physicsworld Very high-energy electrons could prove optimal for FLASH radiotherapy

THERYQ

Click to read the article on physicsworld.com

EXPLORE MORE

QUANTUM | FEATURE

Grete Hermann: the quantum physicist who challenged Werner Heisenberg and John von Neumann

Sidney Perkowitz pays tribute to the pioneering contributions to quantum physics by Grete Hermann

PEOPLE | OPINION AND REVIEWS

How to support colleagues who are dealing with personal issues

Catilin Duffy says that a few simple steps can help when supporting struggling colleagues

BUSINESS AND INNOVATION | PODCAST

Driving skills and innovation in the UK's semiconductor industry

This podcast features the director of Swansea's Centre for Integrative Semiconductor Materials

POLICY AND FUNDING | NEWS

Harvard University sues Trump administration as attacks on US science deepen

Harvard University is the suing the US government over its plan to block up to $9bn of government research grants to the institution

EVERYDAY SCIENCE | BLOG

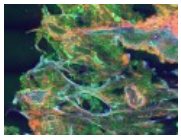
Tennis-ball towers reach record-breaking heights with 12-storey, 34-ball structure

Andria Rogava is back with more spectacular structures made from tennis balls

[dstl] Delivering Mission Success We are hiring Ministry of Defence

INNOVATION SHOWCASE

You can explore our full selection of innovation showcases on our website.



Simultaneous two- and three-photon imaging enables rapid cancer diagnosis

Portable multiphoton microscopy system uses femtosecond laser pulses to create pathology-quality diagnostic images.

Read the full article from HÜBNER Photonics.

OUR LATEST WEBINARS

You can explore our full selection of webinars on our website.

MATERIALS, SPONSORED | WEBINAR

Intercalation-based desalination and carbon capture for water and climate sustainability

Join the audience for a live webinar at 6 p.m. BST/1 p.m edt on 7 May 2025, sponsored by The Electrochemical Society

OPTICS AND PHOTONICS, SPONSORED | WEBINAR

FLIR MIX – a breakthrough in infrared and visible imaging

Join the audience for a live webinar at 2 p.m. BST/3 p.m CEST on 19 May 2025, sponsored by FLIR

MATERIALS, SPONSORED | WEBINAR

Designer van der Waals materials for quantum optical emission

Join the audience for a live webinar at 4 p.m. BST/5 p.m CEST on 9 July 2025, sponsored by PicoQuant

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VACANCIES FROM PHYSICS WORLD JOBS

- Studentships and Research Positions, Loughborough, Leicestershire, UK
- Applied Physics/Systems Engineer, Shanklin, Isle of Wight, UK
- Theoretical Physics Fellowship, Homeworking
- Quantum Sensor Physicist, Plainsboro, New Jersey, US
- Nanofabrication Process Engineer, Vancouver, British Columbia, Canada
- Open Call for Internships in Physics, Vienna, Austria
- Principal RF Engineer, Porton Down, Salisbury, UK
- Faculty Position in Astrophysics at the Institute of High Energy Physics, Beijing, China
- Scientific Project Lead, Quantum Algorithms and AI, London, UK
- Head of Integrated Photonics/Senior Integrated Photonics Engineer, Bristol, UK
- PostDoc and PhD Positions in Two-Dimensional Quantum Materials, Munich, Germany

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